Eric Qian

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I'm a Computer Engineering student and tinkerer with a background of bringing project concept to reality with full-stack CS projects and hardware designs. I'm seeking to architect solutions that would benefit our community and be a force of change responsible for creating a better tomorrow via my interest in frontend, backend, and embedded systems.

Education

California Polytechnic State University - San Luis Obispo San Luis Obispo, CA
Bachelor of Science in Computer Engineering, GPA: 3.53/4.00 Expected Graduation: 2023
Relevant Coursework: Operating Sys., Networks, Object Oriented Design, Data Structures, Microcontrollers, Assembly and Verilog
Teaching Assistant: Python Data Structure (provided office hours, code reviews), EE Lab (provided circuit review, troubleshooting)

Experience

Systems Engineer, Intern ***[Apple Inc.]*** July 2022 to Dec. 2022

- ❏ Built automated UI test framework written in Python, increasing speed and coverage by over 200% from the pre-existing framework.
- ❏ Created web-based visualization and interpretation dashboard to identify Power Management System's efficacy and brownout risks by processing large datasets using NumPy and Plotly, in addition to statistical correlation using field data.
- ❏ Worked on system integration tasks, system coexistence validation, and board component validation.

Design Verification Engineer, Intern ***[Samsung Semiconductor LLC.]*** Q3 2021, Q2 2022

- ❏ Created and maintained randomized UVM test benches written in C++ & SystemVerilog, increasing functional, toggle, and code coverage by over 60%.
- ❏ Built React single-page application with NodeJS backend for dynamic data processing and parsing.
- ❏ Debugged top-level and block-level test bench failures in DUT and worked with system architects to resolve critical design issues.
- ❏ Created debug GUIs that accelerate debug flow for 5 separate data buses using Tcl via Synopsys API.

On-Site IT Student Technician ***[Cal Poly, Information Technology Srv.]*** Sept. 2021 to Apr. 2022

- ❏ Provided reliable on-demand technical troubleshooting assistance to hundreds of faculty members and staff with over 95% satisfaction rate. Practiced a high standard of data security and sanitization.
- ❏ Repaired module-level hardware failures and software-related issues. Replaced memory, storage, GPU based on usage.
- ❏ Experienced with Jira and Trello for issue prioritization and project tracking.

Projects

Trackversal - C, NodeJS, Express, MongoDB, React Native Nov. 2019 to Present

- ❏ Created and assembled a team for an IoT lost and found asset tracking device.
- ❏ Managed a project team and developed backend API written in NodeJS with Express and MongoDB.
- ❏ Worked on frontend stack for mobile devices built with React Native.
- ❏ Completed UART subsystem integration, sourcing proper components, and optimized IoT power consumption by more than 75% via ISR and deep sleep via RTC.
- ❏ Evaluated real-world technical feasibility and market demand.

Full Stack Web Development - React, Angular, NodeJS, NoSQL Mar. 2018 to Present

- ❏ Webmaster or a major contributor to websites for Cal Poly IEEE-HKN, BananiumLabs, Theta Tau SLO, and more.
- ❏ Involved with wireframing/UI design to full-stack implementation. Includes major refactoring efforts, reducing load times by over 50%.

Game Design - Unity, WebGL, C#, Javascript Jan. 2018 to Present

- ❏ Worked with multidisciplinary teams, coding immersive and unique game experiences utilizing Unity and WebGL.
- ❏ C:\ONVERGENCE was placed #3 in Major Jam: Isolation competing with 123 projects; AudiSea VR was placed #4-#6th place in Menlo Hacks III.

Web Technologies: Javascript, NodeJS, PHP, React, HTML, CSS, jQuery, REST APIs, Cloud Infrastructure, Portainer, Load Balancer
Standalone Technologies: Python, C, Java, Linux/Embedded Linux, Tcl, Bash, Unity, Version Control (Git), VSCode, NumPy, Docker
Hardware System Design: Eagle, SPICE, Verilog, Cura & Slic3r, STM32Cube/SEGGER Embedded Studio, Verdi, GPU Architecture
Organizations: BananiumLabs, Inc. Cal Poly CubeSat Laboratory, IEEE-HKN, Theta Tau, GLAARC VEC